I CLAIM:

1. A low NO_x burner nozzle assembly comprising:

an elongated hollow burner tube providing a longitudinally extending conduit for supplying a mixture of fuel and air to a combustion zone, said burner tube having an outer wall surrounding said conduit, a longitudinally extending central axis and a pair of spaced ends;

a discharge nozzle at one of the ends of the burner tube;

an inlet for a mixture of fuel and air at the other end of the burner tube;

an air passageway located outside the outer wall of the burner tube; and

at least one port extending through said outer wall at a location between the discharge nozzle and said inlet intercommunicating the conduit and the air passageway.

2. A nozzle assembly as set forth in claim 1, wherein said air passageway is annular and surrounds said outer wall.

3. A nozzle assembly as set forth in claim 2, wherein said port has a center axis which is essentially perpendicular to said central axis.

4. A nozzle assembly as set forth in claim 2, wherein said port has a center axis which is at an angle relative to said central axis.

5. A nozzle assembly as set forth in claim 2, comprising a plurality of ports extending through said wall at respective locations between the discharge nozzle and said inlet.

6. A nozzle assembly as set forth in claim 5, wherein said ports are arranged in one or more rows which extend around said outer wall.

7. A nozzle assembly as set forth in claim 5, wherein each of said ports has a center axis which is essentially perpendicular to said central axis.

8. A nozzle assembly as set forth in claim 7, wherein said center axes are arranged in a common plane which is essentially perpendicular to said central axis.

9. A nozzle assembly as set forth in claim 1, wherein said location is closer to said discharge nozzle than it is to said inlet end.

10. A nozzle assembly as set forth in claim 8, wherein said common plane is positioned closer to said discharge nozzle than to said inlet end.

11. A nozzle assembly as set forth in claim 1, wherein said discharge nozzle includes a plurality of flow directing members which are arranged to define therebetween a plurality of passageways which extend in generally radial directions relative to said axis, and an end cap mounted on said members in a location to redirect at least a portion of the mixture flowing from the end of the conduit and cause the same to flow through said passageways in a generally radial direction.

12. A nozzle assembly as set forth in claim 11, wherein said members are arranged so that some of said passageways have a larger flow area than others of said passageways.

13. A nozzle assembly as set forth in claim 11, wherein said air passageway is annular and surrounds said outer wall.

14. A nozzle assembly as set forth in claim 13, comprising a plurality of ports extending through said outer wall, and wherein said ports are arranged in one or more rows which extend around said outer wall.

15. A low NO_x radiant wall burner comprising a burner tile having a central opening and a nozzle assembly as set forth in claim 1, the burner tube of said nozzle assembly being adapted and arranged so as to extend through said central opening.

16. A burner assembly as set forth in claim 15, wherein the discharge nozzle of said nozzle assembly includes a plurality of flow directing members which are arranged to define therebetween a plurality of passageways which extend in generally radial directions relative to said axis, and an end cap mounted on said members in a location to redirect at least a portion of the mixture flowing from the end of the conduit and cause the same to flow through said passageways in a generally radial direction.

17. A burner assembly as set forth in claim 16, wherein said members are arranged so that some of said passageways have a larger flow area than others of said passageways.

18. A nozzle assembly as set forth in claim 16, wherein said air passageway is annular and surrounds said outer wall.

19. A burner assembly as set forth in claim 18, comprising a plurality of ports extending through said wall, and wherein said ports are arranged in one or more rows which extend around said outer wall.

20. A burner assembly as set forth in claim 16, wherein the passageways are arranged such that the redirected mixture of fuel and air, when ignited, provides a generally laterally extending flame having an outer peripheral extremity at a location in said zone spaced radially from said axis.

21. A method for operating a burner comprising:

causing a mixture of fuel and air to flow toward a centrally located point adjacent a face of a burner tile;

causing a stream of at least one of additional air and recirculated flue gas to flow toward a location adjacent said face which is spaced laterally from said point; and

separating a portion of said mixture and intermixing the same with said stream to thereby create an fuel lean admixture capable of flameless oxidation before the same reaches said location.

22. A method for operating a burner as set forth in claim 21, said method further comprising separating a second portion of said mixture into a plurality of separate streams, causing said streams to flow radially outwardly from said point across the face of said tile and causing said streams to combust to form a flame which surrounds said point, and flamelessly oxidizing said admixture at said face to create relatively cool oxidation products.

23. A method as set forth in claim 22, comprising admixing said oxidation products with said flame to thereby dilute and cool the same.

24. A method as set forth in claim 21, wherein said stream comprises additional air.

25. A method as set forth in claim 21, wherein said stream comprises recirculated flue gas.

26. A method as set forth in claim 21, wherein said stream comprises recirculated flue gas and additional air.